

CLAIMS

1. Land vehicle weapon system comprising:

a base mount coupled with a land vehicle;

a weapon mount;

5 a plurality of weapons coupled with said weapon mount;

a weapon moving mechanism coupled between said base mount and said weapon mount, said weapon moving mechanism being operable to move said weapons to a combined configuration, between a transportation configuration and a static firing configuration;

10 a plurality of moving elements coupled with at least one of said base mount, said weapon mount, said weapons, and with said weapon moving mechanism;

15 a sensing mechanism coupled with at least one of said weapon mount, said weapons and said base mount; and

at least one user interface coupled with said weapons, said weapon moving mechanism, said moving elements, and with said sensing mechanism, said at least one user interface enabling a user to remotely operate said weapons,

20 wherein said weapon moving mechanism is in form of a four bar linkage whose first link is fixed and is the same as said base mount, a second link of said four bar linkage being rotatably coupled with said first link, a third link of said four bar linkage being rotatably coupled with said second link and with a fourth link of said four bar linkage, said fourth link being rotatably coupled with said first link, at least one of said second link and said fourth link being slidably coupled with said first link, said weapon mount being coupled with at least one of said third link and said fourth link, said weapon moving mechanism being in said transportation configuration, when said second link, said third link, and said fourth link are substantially aligned along a substantially horizontal flat plane, said weapon moving mechanism

being in said static firing configuration, when said four bar linkage is in a substantially triangular geometric form.

2. The system according to claim 1, wherein said weapon moving
5 mechanism moves said weapons to a combined configuration,
between a transportation configuration and a static firing
configuration.

3. The system according to claim 1, wherein said weapons are selected
10 from the list consisting of:

canon;
mortar;
machine gun;
sub-machine gun;
15 coaxial machine gun;
rifle;
missile launcher; and
automatic grenade launcher.

20 4. The system according to claim 1, further comprising a chemical
compound dispenser coupled with said weapon mount.

5. The system according to claim 4, wherein said chemical compound
dispenser dispenses a chemical compound selected from the list
25 consisting of:

smoke;
gas;
foam; and
liquid.

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6. The system according to claim 1, wherein each of said moving elements is selected from the list consisting of:
- electric actuator;
 - mechanical actuator;
 - 5 hydraulic actuator; and
 - pneumatic actuator.
7. The system according to claim 1, wherein said sensing mechanism comprises at least one sensor.
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8. The system according to claim 7, wherein said at least one sensor is selected from the list consisting of:
- laser sensor;
 - sonic sensor;
 - 15 radar; and
 - mechanical sensor.
9. The system according to claim 1, wherein said sensing mechanism comprises an imaging system.
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10. The system according to claim 9, wherein said imaging system is selected from the list consisting of:
- charge-coupled device; and
 - video camera.
- 25
11. The system according to claim 10, wherein said video camera operates in a visible range of wavelengths.
12. The system according to claim 10, wherein said video camera
- 30 operates in a non-visible range of wavelengths.

13. The system according to claim 1, wherein the type of said at least one user interface is selected from the list consisting of:
- tactile;
 - visual;
 - 5 audio; and
 - haptic.
14. The system according to claim 1, wherein said at least one user interface is located within said land vehicle.
15. The system according to claim 1, further comprising a target tracking system coupled with said weapon mount.
16. The system according to claim 1, further comprising a laser designator coupled with said weapon mount.
17. The system according to claim 1, wherein at least one of said moving elements rotates said base mount about a vertical axis substantially perpendicular to a longitudinal axis of said land vehicle.
18. The system according to claim 1, wherein at least one of said moving elements changes the elevation of said weapons.
19. The system according to claim 1, wherein said weapon moving mechanism changes the height of said weapons above a roof of said land vehicle.
20. The system according to claim 1, further comprising a stabilization system coupled with at least one of said weapons, said stabilization system stabilizing the orientation of said at least one weapon,

according to the position of a target, and according to the movement of said land vehicle.

21. The system according to claim 1, further comprising at least one
5 ammunition cartridge coupled with a respective one of said weapons.

22. The system according to claim 1, further comprising at least one
communication interface coupled with said weapons, said moving
elements, said weapon moving mechanism, said sensing
10 mechanism, and said user interface.

23. The system according to claim 22, wherein the coupling of said at
least one communication interface with said weapons, said moving
elements, said weapon moving mechanism, said sensing
15 mechanism, and said user interface, is selected from the list
consisting of:
conductive; and
wireless.

20 24. The system according to claim 1, wherein said land vehicle is
selected from the list consisting of:
wheel driven;
track driven; and
a combination of the above.

25 25. The system according to claim 1, wherein said land vehicle is an
unmanned land vehicle.

26. The system according to claim 1, wherein said weapon moving
30 mechanism moves said weapons between a static firing configuration
and a transportation configuration, said static firing configuration

having a static firing height with respect to said base mount, said transportation configuration having a transportation height with respect to said base mount, said static firing height being greater than said transportation height,

5 wherein the elevation in said static firing configuration is characterized by a first range of angles and the elevation in said transportation configuration is characterized by a second range of angles, and

 wherein said first range of angles is greater than said second
10 range of angles.

27. The system according to claim 1, wherein said base mount is coupled to an outer surface of said land vehicle, without substantial modification to said outer surface and without physically penetrating
15 said land vehicle.

28. The system according to claim 1, wherein said base mount is coupled to an outer surface of said land vehicle, without physically penetrating the hull of said land vehicle.
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